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FORD LABORATORY TEST METHOD AQ 004-01

TEST FOR IRON RICH CONTAMINATION OF STAINLESS STEEL SURFACES

Application

This procedure is used to test for iron on the surface of stainless steel for parts such as mufflers.

Solutions Required

Copper Sulfate Solution

75 g of copper sulfate - $CuSO_4 \cdot 5H_2O$
100 mL of sulfuric acid - C.P. concentrated
900 mL of distilled water

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

1. Cut test specimens 100 x 38 mm from the stainless steel coil.

2. Degrease the surface of the sample thoroughly with a suitable solvent.

3. Immerse the test specimens for a period of 5 minutes in individual beakers containing sufficient copper sulfate solution to totally cover the specimen. The solution should be at 23 +/- 2 °C and should be well agitated before each test.

   The solution may be used repeatedly but should be discarded when copper plates cut out on the surface of a test specimen.

Date	Action	Revisions	
2001 01 31	Revised	Editorial – no technical change	A. Cockman
2000 04 19		Editorial – no technical change	A. Cockman
1992 08 10			

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4. Rinse with distilled water.

5. Examine and report any haze or copper deposit on the surface of the test specimen as required by the material standard.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.

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